

Docket No.: PF-0187-2 DIV

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This is a divisional of Serial No.09/151,412, filed on September 10, 1998, issued on June 4, 2002, as U.S. Patent No. 6,399,345, entitled SUBUNITS OF NADH DEHYDROGENASE, which is a divisional of U.S. Serial No. 08/785,065, filed on January 17, 1997, issued on September 29, 1998, as U.S. Patent No. 5, 814,451, entitled SUBUNITS OF NADH DEHYDROGENASE.

IN THE CLAIMS

Please cancel claim 14 without prejudice or disclaimer.

Please amend claims 1, 3 and 6 as follows. For the Examiner's convenience, all pending claims are listed below.

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1. (Three Time Amended) An isolated antibody which specifically binds to a polypeptide selected from the group consisting of:
- a) a polypeptide comprising the amino acid sequence of SEQ ID NO:1, SEQ ID NO:3, SEQ ID NO:5, or SEQ ID NO:7, and
- b) a polypeptide comprising a naturally-occurring amino acid sequence at least 90% identical to the full length of the sequence of SEQ ID NO:1, SEQ ID NO:3, SEQ ID NO:5, or SEQ ID NO:7, wherein said naturally-occurring amino acid sequence supports NADH dehydrogenase activity.

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2. (As Once Amended) A composition comprising the antibody of claim 1 in conjunction with a suitable pharmaceutical carrier.

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3. (Once Amended) A method of preparing a polyclonal antibody with the specificity of the antibody of claim 1 comprising:
- a) immunizing an animal with the polypeptide of SEQ ID NO:1, SEQ ID NO:3, SEQ ID NO:5, or SEQ ID NO:7, or an antigenically-effective fragment thereof under conditions to elicit an antibody response; and
- b) screening for antibodies with the polypeptide thereby identifying a polyclonal antibody which binds specifically to the polypeptide of SEQ ID NO:1, SEQ ID

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NO:3, SEQ ID NO:5, or SEQ ID NO:7.

4. An antibody produced by a method of claim 3.
5. (As Once Amended) A composition comprising the antibody of claim 4 in conjunction with a suitable pharmaceutical carrier.
6. (Twice Amended) A method of making a monoclonal antibody with the specificity of the antibody of claim 1 comprising:
- using the polypeptide of SEQ ID NO:1, SEQ ID NO:3, SEQ ID NO:5, or SEQ ID NO:7, or an antigenically-effective fragment thereof, to make antibody-producing hybridoma cells; and
 - screening for antibodies with the polypeptide, thereby identifying a monoclonal antibody which binds specifically to the polypeptide of SEQ ID NO:1, SEQ ID NO:3, SEQ ID NO:5, or SEQ ID NO:7.
7. A monoclonal antibody produced by a method of claim 6.
8. (As Once Amended) A composition comprising the antibody of claim 7 in conjunction with a suitable pharmaceutical carrier.
9. The antibody of claim 1, wherein the antibody is:
- a chimeric antibody;
 - a single chain antibody;
 - a Fab fragment; or
 - a F(ab')₂ fragment.
10. The antibody of claim 1, wherein the antibody is produced by screening a Fab expression library.
11. The antibody of claim 1, wherein the antibody is produced by screening a

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recombinant immunoglobulin library.

12. A method for detecting polypeptide of SEQ ID NO:1, SEQ ID NO:3, SEQ ID NO:5, or SEQ ID NO:7 in a sample comprising the steps of:

- a) combining the antibody of claim 1 with a sample under conditions to allow specific binding; and
- b) detecting specific binding, wherein specific binding indicates the presence of polypeptide of SEQ ID NO:1, SEQ ID NO:3, SEQ ID NO:5, or SEQ ID NO:7 in the sample.

13. A method of using an antibody to purify polypeptide of SEQ ID NO:1, SEQ ID NO:3, SEQ ID NO:5, or SEQ ID NO:7 from a sample, the method comprising:

- a) combining the antibody of claim 1 with a sample under conditions to allow specific binding; and
- b) separating the antibody from the protein, thereby obtaining purified polypeptide of SEQ ID NO:1, SEQ ID NO:3, SEQ ID NO:5, or SEQ ID NO:7.